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AUTHORITY
AGO D/A ltr, 29 Apr 1980

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DEPARTMENT OF THE ARMY  
OFFICE OF THE ADJUTANT GENERAL  
WASHINGTON, D.C. 20310

IN REPLY REFER TO

AGAM-P (M) (29 Oct 68) FOR OT RD 683187

1 November 1968

SUBJECT: Operational Report - Lessons Learned, Headquarters, 815th  
Engineer Battalion (Const), Period Ending 31 July 1968

AD 843052

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2. Information contained in this report is provided to insure that the Army realizes current benefits from lessons learned during recent operations.
3. To insure that the information provided through the Lessons Learned Program is readily available on a continuous basis, a cumulative Lessons Learned Index containing alphabetical listings of items appearing in the reports is compiled and distributed periodically. Recipients of the attached report are encouraged to recommend items from it for inclusion in the Index by completing and returning the self-addressed form provided at the end of this report.

BY ORDER OF THE SECRETARY OF THE ARMY:

*Kenneth G. Wickham*

KENNETH G. WICKHAM  
Major General, USA  
The Adjutant General

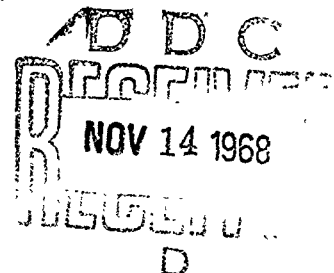
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DEPARTMENT OF THE ARMY  
Headquarters, 815th Engineer Battalion (Construction)  
APO San Francisco 96318

AGCD-OP

31 July 1968

SUBJECT: Operational Report of the 815th Engineer Battalion (Construction) for  
period ending 31 July 1968, RCS CSFOR-65 (RI)

THRU: Commanding Officer  
937th Engineer Group (Combat)  
APO 96318

Commanding General  
18th Engineer Brigade  
ATTN: AVHC-C  
APO 96377

Commanding General  
United States Army, Vietnam  
ATTN: AVHCC-DST  
APO 96375

Commander-in-Chief  
United States Army, Pacific  
ATTN: GFOP-DT  
APO 96558

TO: Assistant Chief of Staff for Force Development  
Department of the Army (ACSFOR-DA)  
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31 July 1968

SUBJECT: Operational Report of the 815th Engineer Battalion (Construction) for period ending 31 July 1968, RCS CSFOR 65 (RI)

1. Section 1, Operations: Significant Activities  
a) General.

1) The 815th Engineer Battalion (Construction) is attached to the 937th Engineer Group (Combat) and has a conventional relationship with its parent unit. The battalion is presently organized as shown in Inclosure 1.

2) The 815th Engineer Battalion (Construction) has been assigned the following missions by the 937th Engineer Group (Combat):

- a) To provide operational support as directed.
- b) To carry out construction as directed.
- c) To operate and secure Connell Quarry, Pleiku, RVN.
- d) To operate and secure former RMK facilities, Pleiku, RVN.
- e) To operate OP-10, Pleiku, RVN

3) Personnel Administration, Morale and Discipline.

a) Personnel: The average present for duty strength of the battalion and its units remained within range of 88 to 99 percent of their authorized strengths, with an average of approximately 93.5 percent during the reporting period.

b) Morale and Discipline:

1) Morale was high during this quarter due to continued improvement of cantonment facilities and very light monsoon rains this season. Also the R & R programs, including the 18th Engineer Brigade (Cam Rahn Bay) and Vun Tau in-country R&R sites, are being fully utilized.

2) Disciplinary problems during the quarter were limited largely to traffic offenses, off-limits and curfew violations and sleeping on guard. There were thirteen (13) special courts-martial cases.

3) Attendance at the battalion theater has increased and different movies are shown five evening per week. Continued improvement is evident in the Officer, NCO and EM Clubs on Engineer Hill.

4) Ample religious services are provided the men of the Catholic, General Protestant and Latter Day Saints faiths. Jewish personnel and those of other religious sects are provided information regarding, and the opportunity of attending, their own services. The Battalion Chaplain conducted weekly Bible Study classes, fifty-one (51) religious services and fifteen (15) communion services this last quarter. Besides his counseling periods in the morning and evenings he visits the job sites, quarters and barracks almost daily. On Tuesdays he visits the area hospitals.

5) The Battalion's R&R facilities are being fully utilized. In addition to dayrooms, basketball and volleyball courts, all companies have added horseshoes to their athletic facilities. The companies are continuing to receive both magazines and paperback books on a regular basis.

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4) Intelligence and Counterintelligence. The battalion has continued processing of the required personnel security clearances during this report period. Spot reports have been submitted on all verified and probable enemy contacts. Daily liaison was made with S2 section, 937th Engineer Group (Combat) for current local intelligence data and daily briefings were held in the battalion Tactical Operations Center (TOC) for company operations personnel and representatives of the principal battalion staff sections.

b) Plans and Operations

f) General.

a) During this report period primary emphasis was placed on the earthmoving and horizontal capabilities of the battalion in order to finish as much of the earthwork as possible before the monsoon season started. Vertical construction continued on projects in the immediate Pleiku area, Dragon Mountain Base Camp, Cheo Reo and Kontum.

b) Company B, 589th Engineer Battalion (Construction) was returned to the control of the 589th Engineer Battalion (Construction) on 10 July 1968.

On 17 July 1968 the 542nd Engineer Detachment (Power Distribution) was placed under the OPCON of the 815th Engineer Battalion to assist in the construction of a power distribution system in the Logistical Depot Complex, Pleiku.

No problems were encountered in the transfer of these units.

2) Operation Support. No combat support missions were assigned this unit although continuous equipment operator support was provided the other battalions of the 937th Engineer Group (Combat) to assist in the accomplishment of their assigned missions. The following operational support missions have been undertaken by this unit during the report period.

a) Minimum Essential Requirements (MER)

1) 355th Aviation Company-Completed construction of the six CH-54 (Sky Crane) revetments with the additional endwall that was required. Repair damaged showers and latrines in the area and improved the drainage around the helport. All that remains is the penepriming of the helport area to control the existing dust problem.

2) 62nd Maintenance Battalion (DS) and 88th Transportation Battalion (SST) - Seven each showers and latrines are 98 percent complete, four each shower and latrines are 90 percent complete. Presently, nine showers and eight latrines have not been started but are scheduled for construction this next quarter.

b) Ammunition Storage Point (ASP) BEMMS, Kontum. Our portion of the project has been completed. Our responsibility was to construct two (2) five (5) berm modules. Over 24,000 CY of earth fill were hauled and compacted and 400 feet of culvert placed to complete the project.

c) Water Wells. At Cheo Reo MACV Advisor Camp a well was completed

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providing 45 gallons of water per minute, water depth is 70 feet in a 104 foot well. Also constructed at the well site were a 3000 gallon water tower, 20ft x 20ft pump building and concrete floor slab. One more well remains to be drilled to complete the project.

3) Construction. During this report period the following projects were completed or in progress.

a) Lines of Communications (LOC) Maintenance and Upgrading. At the end of this report period 98 percent of the upgrading work on QL14 from Artiller Hill to Kontum has been completed. In addition the repair of QL19 from Fleiku to the base of the Mang Giang Pass was initiated. Work has involved realignment filling or cutting to grade, subbase and base course preparation and paving with asphaltic concrete in accordance with 18th Engineer Brigade specifications. During this period 24.6KM of highway was surfaced with 12 foot wide pavement on QL14. Besides the road work the battalion has prefabricated and delivered 80 percent of the 450 bridge bearing plates required for bridges 14-32 and 19-30, which are being build by other units.

b) Connell Quarry and Crusher Site. Crushed rock production for the report period averaged 507 CY per day. Approximately 450 CY per day were issued for LOC and other roadway upgrading programs, hardstands and other construction projects, asphaltic concrete and portland cement concrete. Approximately 6400 CY of 3in, 350 CY of 1 1/2 in and 430 CY of 3/4 in rock were on hand at the end of this reporting period. During this report period improvements at the quarry included renovation of the security bunkers and the construction of a 140ft x 104ft mortar pad. The construction of this pad required a total of 1770 CY of fill.

c) Operation of the Construction Industrial Area (CIA) Crusher Site. During this report period an average of 364 CY per day of crushed rock was produced. Approximately 17,000 CY of crushed rock were issued for asphaltic concrete and portland cement during this report period.

d) Operation of OP10 Quarry Site. On 18 July 1968 the battalion assumed the responsibility of operating this quarry site, which previously was under the control of the 70th Engineer Battalion (Combat). Since assuming responsibility for the site 1015 CY of blast rock has been issued to the CIA Crusher. Upgrading the access road into the quarry has been initiated to make the road useable during wet weather.

e) Ammunition Storage Point (ASP)-Logistical Depot. Construction of the 20,000 foot security lighting system was completed this period. A total of 135 poles with the appropriate insulators and lights were set, and over 11,000 feet of power cable was strung to complete the lighting system. In addition 0.8 KM of double lane asphaltic concrete pavement was placed and twenty-four (24) concrete entrance pads to the MSAI ammunition storage pads were poured. Approximately 720 CY of concrete were used to complete the entrances to the ammunition storage pads. All that remains to complete the project is the construction of sixteen (16) earth berms around the remaining ammunition storage pads that presently do not have them.

f) Pipeline - An Khe to Fleiku. During this report period three (3) of the six (6) pump stations were completed with the installation of the necessary electrical items. The 643rd Engineer Company (FL/CS) replaced 10,320

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7 SUBJECT: Operational Report of the 815th Engineer Battalion (Construction) for period ending 31 July 1968, RCS CSFOR-65 (RI)

feet of damaged sections of pipeline, constructed eight (8) road crossings, entrenched six (6) miles of pipe and buried one and a half (1.5) miles of pipeline. At the end of this report period the pipeline had been water tested to within one (1) mile of pump station eight (8). Total project is 90 percent complete as of this date.

g) 50 Thousand Barrel Tank Farm-Pleiku. During this report period the remaining three (3) 10,000 BBL tanks were turned over to FA&E. The upgrading and paving of the truck fill station approach road with 0.65 KM of double lane asphaltic concrete was completed. All that remains is the installation of four (4) six inch, single stage pumps to complete the tank manifold system and the 5,000 foot security lighting system.

h) Roads and Hardstands-Logistical Depot. This project is now 99 percent complete. Approximately 24,500 CY of earth fill and 7600 CY of rock was hauled and placed for upgrading of the roads and hardstands. In addition 2900 feet of culvert was assembled and placed and 240 CY of concrete was poured for the necessary headwalls to complete drainage for the Logistical Depot Complex. Also accomplished was the upgrading and paving, with asphaltic concrete, of 1.75 KM of double lane road, construction of 28,000 SY of hardstands and laying of approximately 40,000 SY of MSA1 matting, to complete this unit's portion of the 100,000 SY of matting required. All that remains is the upgrading and paving of 0.3 KM of double lane road.

i) Autosevcom - Construction was started on the 1000 SF air conditioned switch building this report period. At present the concrete floor slab with the necessary electrical and water entrances through the floor have been placed. Work is presently at a halt, while a reevaluation of the concrete block wall design is being made. Project is 15 percent complete to date.

j) Dial Central-Dragon Mountain. Construction of the Dial Center Facilities at the end of this report period is 60 percent complete. All the superstructure for the 2400 SF air conditioned office building has been completed and 50 percent of the 1 x 8 siding has been placed. Roofing of the office has been started and the cable ends are being completed. The wiring, paneling, ventilation system, generator shed and pad remains to complete the project.

k) Aircraft Maintenance Facilities-Holloway. Construction of one (1) 80ft x 144 ft wood framed aircraft maintenance hangar was completed and the second 80ft x 144ft hangar was 80 percent complete at the end of this report period. Land clearing and earthwork has been started on the construction of a 175ft x 190ft pre-engineered maintenance hangar.

l) Aviation Support Facility-Dragon Mountain. At the end of this report period the 75ft x 202ft aircraft maintenance hangar was 98 percent completed. Work done included the purging of the door guide footers and half the floor slab, placing tin on the roof and hanging the doors. The electrical wiring is all that remains to be completed.

m) Cantonment Facilities and Miscellaneous Facilities-Pleiku. During this report period 98 percent of the 100,000 SF of EM billets was completed in the Pleiku Cantonment directive. All that remains to finish the billets is installing some minor electrical items. Under Miscellaneous Facilities, 1000 SF of cold storage sheds, 14,400 SF of mess halls and 11,000 SF of orderly/supply

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rooms have been constructed. Construction is underway on 24,400 SF of EM bil 14,000 SF of BOQ's and 4600 SF of unit maintenance shops. Overall project is percent complete as of the end of this report period.

n) Installation Storage Warehouses and Direct Support (DS). Maintenance Facilities Logistical Depot. During this report period one (1) 40ft x 100ft and two (2) 40ft x 200ft Pascoe warehouse buildings were completed. The remaining eleven (11) 40ft x 100ft warehouses require wiring to be completed. Wiring layout design change has resulted in a delay in completing the Installation Warehouse project. The overall project is 98 percent complete. The overall Direct Support Maintenance Facilities project is 89 percent complete. Construction during this report period included a 12,000 SY hardstand and the erection of one (1) 40ft x 100ft warehouse building. Work remaining to complete the project includes the pouring of the floor slab, hanging of the doors and the electrical wiring.

o) Christmas Tree Heliport, Heliport Revetments and Loads-Camp Holloway. During this report period repair of the revetments and pennepriming of the immediate area around the heliport for dust control was accomplished. All that remains to complete the project is the installation of the fixed lighting system for the heliport. Work was started on the interior roads in Camp Holloway during this period. Approximately 14,500 CY of fill and 4500 CY of rock have been hauled and placed to date. In addition 480 feet of culvert was assembled and placed for the drainage required in the area. The overall project is 90 percent complete as of the end of this report period.

p) Power Plant and Distribution System-Logistical Depot. Construction of the 2000 KW power plant (four (4) 500 KW generators), which will provide power for the entire Logistical Depot Complex, Ammunition Storage Point and Artillery Hill, has been completed with the exception of the access road. The power distribution system is in the process of being redesigned by the OIC of 542nd Fwr Dist. Team and Quinton Engineers. No other work has been done to date.

q) Air Force Open Storage Air Freight - During this report period 7000 SY of asphaltic concrete was laid to complete this project. Project involved only the paving of the hardstand.

r) Dragon Mountain Support Facilities and Water Well Fill Points - Dragon Mountain. The overall Dragon Mountain Support Facilities project consists of the construction of 43,000 SF of new unit maintenance shops and the wiring of thirteen (13) existing unit maintenance shops. These new facilities vary in length from 30ft to 105ft and are 26ft wide. The project at this time is 48 percent complete. Work to date has included the wiring of the existing shops, completion of five (5) of the new shops and the pouring of footers and floor slabs in several others. The Water Well Fill Points project is 67 percent complete to date. Work accomplished this period included the erection of two (2) 250 BEL storage tanks and one (1) water tower.

4) Logistics. The Engineer Class IV yard of this battalion accommodated an average of 72 tons of issued and received materials per day. This included bulk totals of 50,000 bags of cement, 10,000 barrels of asphalt products and approximately 3½ million board feet of lumber. In addition, approximately 1500 separate items of engineer supplies were received, stored and issued by S-4 Section. Other battalions and separate units, ARVN Engineers, and various civic action

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31 July 1968

Subject: Operational Report of the 815th Engineer Battalion (Construction) for period ending 31 July 1968, HCS CSFOR-65 (RI)

programs received continued support. Civic action support included distributing empty asphalt barrels, salvaged lumber, packing crates, dunnage and broken bags of cement.

The battalion prefabrication shop completed a total of 50 work requests during the report period. Such items as bunkers, panel doors, standard buildings and tent kits were prefabricated by this shop. In addition to the normal work in the prefab shop a Vietnamese crew performed reinforcing rod to desired configurations required for various projects.

Certain items of electrical and plumbing supplies continued to be in a critical shortage, especially duplex receptacles, toggle switches, electrical wire, circuit breakers, small valves and couplings. Efforts were made to alleviate shortage by direct contact with the Qui Nhon Depot and by furnishing transportation to haul critical items as necessary.

The battalion maintenance program was successful in maintaining the critical deadline rate at approximately eight (8) percent, while the overall deadline rate averaged approximately four (4) percent. A major problem in the maintenance area has been a shortage of repair parts of high mortality rate, eg. wheel bearings, wheel seals etc. To preclude this situation, units will requisition parts of this nature on an anticipated need to coincide with scheduled maintenance service. Preparation for the monsoon season included acquisition of additional brake shoes and wiper blades for all vehicles.

Civic Affairs, During this report period the battalion's civic action team has been more active than in the past. The team has distributed toys and scrap lumber and has assisted in the construction of a town hall and town administrative offices in neighboring villages. The battalion Surgeon, and two medics, have continued to provide medical assistance and supplies to local villages in the area.

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31 July 1968

SUBJECT: Operational Report of the 815th Engineer Battalion (Construction) for period ending 31 July 1968, RCS CSFOR-65 (R1)

### 2. Section 2, Lessons Learned: Commander's Observations, Evaluations and Recommendations.

#### Recommendations.

a) Personnel  
None

b) Operations

#### 1) Crushing Excessively Dirty Blast Rock.

a) OBSERVATION. Crushing dirty blast rock during the monsoon season has caused excessive clogging of the shaker box, rock chutes, and jaws of the rock crusher, thus reducing the production capability of the crusher and causing excessive wear on some crusher components.

b) EVALUATION. To eliminate the problem, washing of the crusher's jaws and chutes approximately every one half hour was tried. This proved unsatisfactory, as the crusher clogged again immediately after washing. A quite satisfactory method was to wash the rock continuously, utilizing a 5000-gallon water tanker. However, this required at least three 5000-gallon tankers. Due to the volume of water used, and the mud generated by washing, a considerable drainage problem was created. Thus a better method of washing was required at the CIA crusher site. The problem was eliminated by digging a small depression in the area where the blast rock was loaded, filling it with water, and picking the rock up through the water. The water saturated and broke up the mud, allowing it to process through the crusher without clogging. This method required less water than did continuous washing and cut drainage problems considerably.

c) RECOMMENDATION. Where possible, blast rock should be washed before it reaches the crusher's jaws to decrease downtime due to mud clogging.

#### 2) Using Compressed Air and Water to Clean Dirty Blast Rock.

a) OBSERVATION: Mud from the blast rock was causing excessive downtime by clogging the waste chute on the 225 TPH crushing plant.

b) EVALUATION. The rock being carried to feed the 225 TPH crushing plant comes from an area which contains a considerable amount of clay throughout the formation. During the monsoon season, this clay becomes very plastic and sticky, eventually clogging the waste chute of the crusher and forcing a halt in the operation. To alleviate this problem and allow a more continuous operation, compressed air and water were played over the surfaces of the waste chute through an outlet welded to the side of the chute (see Inclosure 2), passing a flow of air at 90 degrees to the water inlet, a vacuum was created siphoning the water from the water tank through the hose and into the air stream. The volume of water was controlled by the air pressure. This system is especially useful if a water pump is not available.

c) RECOMMENDATION. By using this device to clean mud from the waste chute, down-time can be avoided without the use of any pumping apparatus.

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3) Digging, Forming and Pouring Headwalls.

a) OBSERVATION. It was found that too many manhours were required to install a culvert headwall.

b) EVALUATION. A system to speed up the placement of a culvert and headwall, get better utilization of carpenters was needed. A Massey-Ferguson or John Deere backhoe, when used properly, will decrease the hours required to install a three (3) CY headwall from seventy (70) hours to a maximum of thirty (30) hours.

c) RECOMMENDATION. When possible, a backhoe should be used to excavate the culvert headwall to save on manhours required for the job.

4) 16S Mixer Operation.

a) OBSERVATION. It has been found that after extended use of a 16S mixer, exorbitant manhours are required to clean the machine.

b) EVALUATION: An exterior coating of form oil was used to decrease the number of manhours required for cleaning. This proved very successful in that the required number of manhours necessary for cleaning was reduced by one-third.

c) RECOMMENDATION. Use form oil as an exterior coating to decrease the total number of manhours required for cleaning of the 16S mixer.

5) Mixing Soil-Cement in a 16S Mixer.

a) OBSERVATION. It was found that while mixing a soil-cement mix for a pad, one 16S mixer does not produce a good mix due to the lack of a coarse aggregate.

b) EVALUATION. After some experimentation it was found that three (3) mixers used in a Y formation produced the desired results. One 16S mixes water and decomposed granite, while the other mixes water and cement. After a brief period, both are dumped into the third skip, where the two are mixed and delivered. Three 16S mixers used in this manner obtain better results, deliver as much mix as three (3) individual machines and produces a more uniform mix.

c) RECOMMENDATION. When mixing a soil-cement mix, three (3) 16S mixers should be used to obtain the best results.

6) Testing Petroleum Pipelines

a) OBSERVATION. In testing the pipeline, many stoppages were caused by foreign material clogging the inside of the pipe. This resulted in many man-hours being expended in finding these stoppages.

b) EVALUATION. A method of testing had to be developed to eliminate as much of the foreign material as possible. It was found that while testing the line, it is best to separate it at as many low places as possible and flush the line with water, thus eliminating much of the foreign material. This flushing process should occur a minimum of once every mile.

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c) RECOMMENDATION. When water testing a pipeline, the total manhours and equipment hours involved can be decreased by initially flushing the line before testing.

## 7. Modification of Dump Drive Shaft U-Joints on Asphalt Distributor, Model M-54.

a) OBSERVATION. The U-joints used on the drive shaft from the transfer gear box to the asphalt pump on the M-54 asphalt distributor were wearing out at an unusual rate.

b) EVALUATION. The apparent reason for the failure was that the type of U-joint used did not have bearings incorporated into its design. To alleviate the problem two 3/4 truck U-joints were bolted end to end as shown in inclosure 3. An adapter, as illustrated (see inclosure 3) was welded to the other end of the U-joints so they could be coupled to the drive shafts. This completed the modifications. Since adopting this modification several months ago, the system has worked perfectly.

c) RECOMMENDATION. 3/4 tone truck U-joints can be substituted for the regular asphalt distributor pump drive shaft U-joints if standard replacement parts are not available through supply channels.

## 8. Placing #4 Cable or Any Type of Heavy Power Cable into Insulators above Six feet in Height.

a) OBSERVATION. In constructing the security lighting system in the Ammunition Storage Point, the specialized personnel and equipment were unavailable.

b) EVALUATION. In stringing four and one half (4½) miles of power cable for the security lighting system at the Ammunition Storage Point, a shortage of pole climbers developed. This was overcome with the use of rough terrain forklifts with conex containers mounted on the teeti. This enabled two men to work on each pole at one time and neither had to have pole climbing experience. Another problem was tightening the power cable sufficiently to prevent excessive sag. This problem was overcome by the use of a 3/4-ton truck with a winch and a crane with a hook attachment. This allowed the cable to be tightened between three (3) light poles at one time, to the proper sag limits.

c) RECOMMENDATION. In accessible areas where these pieces of equipment can be used, the stringing process can be accomplished faster and with better efficiency without the use of specialized equipment and personnel.

c) Training None

d) Intelligence None

e) Logistics

## 1) Tailgating 55-gallon POL Drums

a) OBSERVATION. Storage areas receiving 55-gallon drums of POL or asphalt

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SUBJECT: Operational Report of the 815th Engineer Battalion (Construction) for period ending 31 July 1968, MCS CSFOR-65 (II)

products are often not equipped with a loading and unloading dock, necessitating some other means of unloading the drums.

b) EVALUATION. On the absence of unloading facilities the barrels must either be tailgated from the truck or unloaded by using a crane, wrecker or forklift. Tailgating is extremely hard on drums causing many to split. This results not only in needless waste, but also creates an undesirable working condition. Generally, equipment necessary for unloading these drums is in great demand elsewhere. With the construction of a small portable unloading ramp approximately four (4) feet high, five (5) feet long and twenty-eight (28) inches wide the problem was solved. This eliminated the need for critical pieces of equipment to unload the drums, since the ramp was of such size that two (2) to four (4) men could handle it.

c) RECOMMENDATION. When unloading 55 gallon drums, where the necessary equipment is unavailable, a portable loading ramp should be constructed.

f) Organization  
None

g) Other  
None

*Charles P. McIlwain*  
CHARLES P. MCILWAIN  
MAJ, CE  
Commanding

-Incl-

--as- Incl 1 Withdrawn, HQ, DA

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FT. Belvoir, VA. 22060  
19- 815th Engr BN (Const), APO 96318

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AGC-CO (31 July 1968) 1st Ind

SUBJECT: Operational Report on Lessons Learned for the Period 1 May 1968  
to 31 July 1968

DA, Headquarters, 937th Engineer Group (Combat), APO 96318, 24 August 1968

TO: Commanding General, 18th Engineer Brigade, ATTN: AVBC-C, APO 96377

1. The subject report, submitted by the 815th Engineer Battalion (Construction), has been reviewed and is considered a well compiled report of organizational activities.

2. I concur with the observations and recommendations of the Battalion Commander.

*Jesse L. Fishback*

JESSE L. FISHBACK  
Colonel, CE  
Commanding

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16  
AVBC-C (31 Jul 68) 2nd Ind  
SUBJECT: Operational Report of the 815th Engineer Battalion (Const)  
for the Period Ending 31 July 1968, RCS CSFOR - 65 (R1)

DA, Headquarters, 18th Engineer Brigade, APO 96377 13 SEP

TO: Commanding General, U.S. Army Vietnam, ATTN: AVHGC-DST, APO 96375

1. This headquarters has reviewed the Operational Report - Lessons Learned for the 815th Engineer Battalion (Const) as indorsed by the 937th Engineer Group (Combat). The report is considered to be an excellent account of the Battalion's activities for the reporting period.
2. This headquarters concurs with the observations and recommendations of the Battalion and Group Commanders.

*Douglas K. Blue*  
DOUGLAS K. BLUE  
Colonel, CE  
Acting Commander



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AVHGC-DST (31 Jul 68) 3d Ind MAJ Klingman/ds/LBN 4433  
SUBJECT: Operational Report of the 815th Engineer Battalion (Construction)  
for period ending 31 July 1968, RCS CSFOR-65 (RI)

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375

8 OCT 1968

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOF-DT,  
APO 96558

1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 July 1968 from Headquarters, 815th Engineer Battalion (Construction).

2. Reference item concerning modification of drive shaft U-joints on asphalt distributor, model M-54, page 10, paragraph 2b(7): Nonconcur. Page 47, TM 3895-220-15, shows two grease fittings which must be lubricated at 50 hours of normal operation. This action would not be possible with the suggested modifications.

FOR THE COMMANDER:



A.R. GUENTHER  
CPT. AGC  
ASST. ADJUTANT GENERAL

Cy furn:  
HQ 815th Engr Bn (Const)  
HQ 20th Engr Bde

18  
GPOP-DT (31 Jul 68) 4th Ind  
SUBJECT: Operational Report of HQ, 815th Engr Bn (Const) for Period  
Ending 31 July 1968, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 1 5 OCT 1968

TO: Assistant Chief of Staff for Force Development, Department of the  
Army, Washington, D. C. 20310

This headquarters has evaluated subject report and forwarding indorse-  
ments and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:

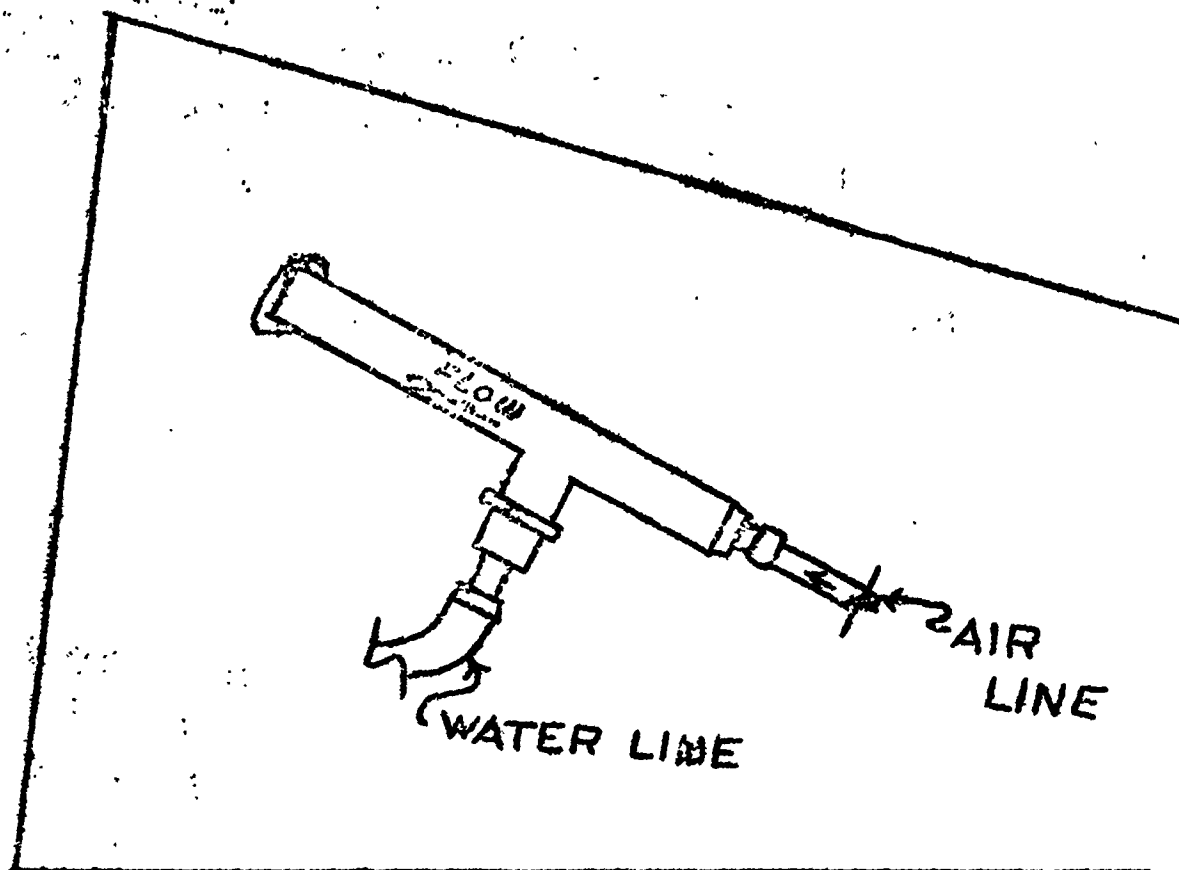
*C. L. Shortt*

C. L. SHORTT  
CPT, AGC  
Asst AG

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SKETCH OF  
Water - Air Assembly



Inclosure #2

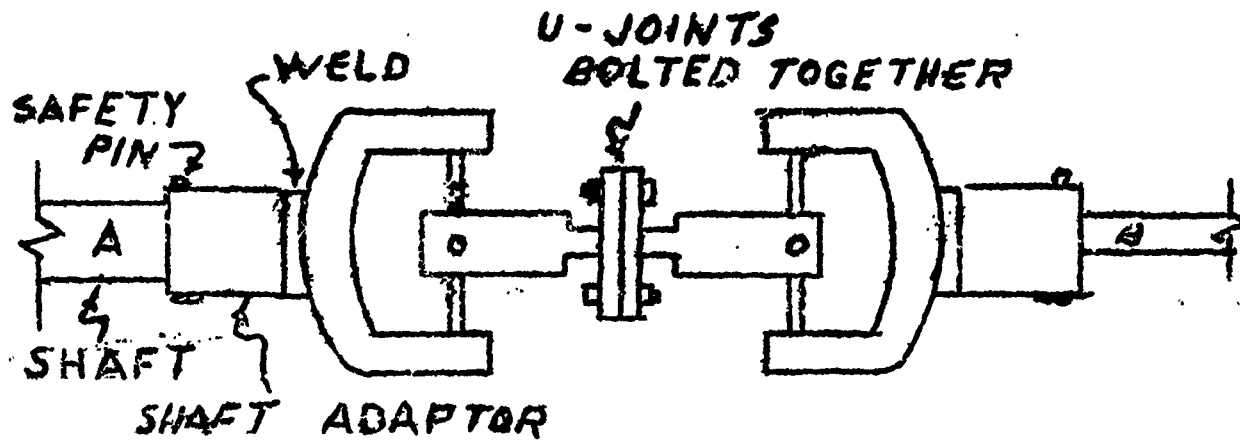
16

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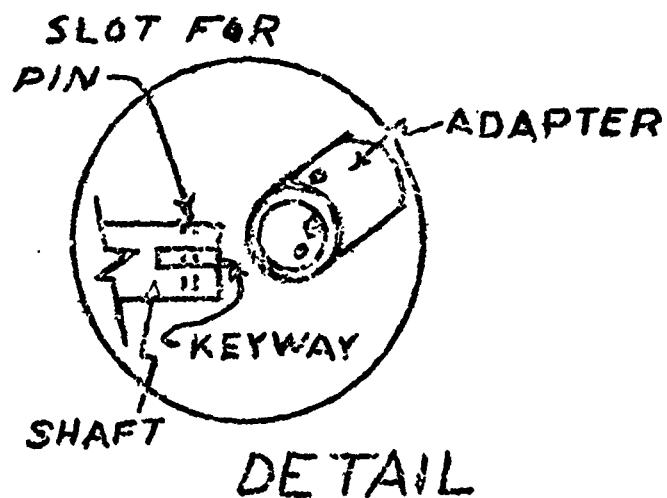
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SKETCH OF  
U-Joint Assy

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N.B. SHAFTS A &  
B ARE OF  
DIFFERENT  
DIAS.



Inclosure #3

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UNCLASSIFIED

Security Classification

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The following items are recommended for inclusion in the Lessons Learned Index:

ITEM 1

\* SUBJECT TITLE \_\_\_\_\_

\*\* FOR OT RD # \_\_\_\_\_

\*\*\*PAGE # \_\_\_\_\_

ITEM 2

SUBJECT TITLE \_\_\_\_\_

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PAGE # \_\_\_\_\_

ITEM 3

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ITEM 5

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\* Subject Title: A short (one sentence or phrase) description of the item of interest.

\*\* FOR OT RD # : Appears in the Reply Reference line of the Letter of Transmittal. This number must be accurately stated.

\*\*\*Page # : That page on which the item of interest is located.